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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,473	12/10/2001	Mehrdad Ziari	P1194 US	4571

27975 7590 12/09/2003

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EXAMINER	
STRECKER, GERARD R	

ART UNIT	PAPER NUMBER
2862	

DATE MAILED: 12/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,473	ZIARI ET AL.	
	Examiner	Art Unit	
	Gerard Strecker	2862	AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 September 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-54 and 68* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *22-54 and 68* is/are allowed.

6)☒ Claim(s) *1,2 and 16-21* is/are rejected.

7)☒ Claim(s) *3-15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claims 1, 2 and 16-21 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaguchi et al (4,523,802), hereinafter Sakaguchi, in view of Jin et al (6,205,364), hereinafter Jin, or Auracher et al (6,271,049), hereinafter Auracher.

Sakaguchi discloses (Figs. 3-5) a fiber-coupled laser optical connection module for attaching an optical component to a substrate and aligning said optical component with a laser, comprising: a substrate 5; a fiber submount 8 that is attached to said substrate and that includes a thermally insulating material (silica glass, col. 3, lines 8-10) having a thickness h3 greater than 20 micrometers (col. 3, lines 18-20); an optical component (optical fiber 3) that is soldered (col. 2, lines 3-6 and col. 4, lines 66-68) to said fiber submount using heat; a laser submount (2, or 2, 9) made of diamond attached to said substrate; and a laser 1 attached to said laser submount and aligned with said optical component. Sakaguchi does not reveal how the heat is applied to solder the fiber to the submount.

Jin discloses (Figs. 1A, 1B) an optical connection module comprising: a substrate 18, a submount (14, 17; 20) attached to said substrate; an optical component (13, 19) soldered to said submount; a laser submount (12) attached to said substrate; and a first laser (11) attached to said laser submount. As shown in Fig. 1B (col. 4, lines 49-54) the optical component can be soldered using a heat source such as a laser (which would be a second laser).

Auracher discloses an optical connection module (Figs. 1 and 2) in which optical components (9, 10, e.g.) are soldered to a submount (2) using the heat supplied from a laser (col. 2, lines 40-46 and col. 5, lines 23-46).

It would have been obvious to one skilled in the art to employ a laser in conjunction with the module of Sakaguchi for soldering the fiber to the submount, as taught by Jin and Auracher, to provide a rapid, cost effective and efficient technique for carrying out the soldering function.

Applicant's arguments filed 9/26/03 have been fully considered but they are not persuasive. Applicants argue that, "it is not appropriate to combine the teachings of Sakaguchi with the teachings of either Jin et al or Auracher et al, because Sakaguchi et al teach away from the instant invention as defined in claim 1. More specifically, at column 4, lines 66-68, and column 5, line 1, Sakaguchi et al specify that 'the solder is melted by heating the coupling system as a whole'. Heating the coupling system as a whole defeats the unforseen advantages of providing a fiber submount having a thermally insulating material with a thickness greater than 20 micrometers and an optical component that is soldered to said fiber submount using heat from a second laser, as defined in currently amended claim 1. For example, one unforseen advantage is that the resulting optical connection module includes an insulating portion to protect the first laser from heat from the second laser. Heating the coupling system as a whole would damage the first laser, in direct contrast to the instant invention."

Although Sakaguchi melts the solder by heating the coupling system as a whole, there is nothing which would prevent the heat to be locally supplied for soldering the optical component to the submount, if so desired. By using a laser (second laser), in the process of constructing Sakaguchi's connection module, to supply local heating for soldering the optical component to the submount, as taught by Jin and Auracher, direct damage to the laser (first laser) attached to

the laser submount would be avoided and the heating would be more specifically and effectively directed, thus optimizing the overall attachment process. Obviously, any available known form of solder composition (claim 17) could be selected for soldering the optical component to the submount.

Claims 3-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to G. R. Strecker at telephone number 305-4937.

Strecker/ek

12/08/03

Gerard R. Strecker
GERARD R. STRECKER
PRIMARY EXAMINER